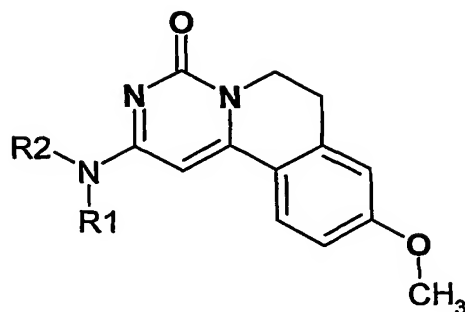


What is claimed is:

1. A compound of the formula I, or a salt, solvate, or a physiologically functional derivative thereof

5



I

10

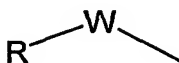
in which

R1 is hydrogen, -NH₂, or C₁₋₆alkyl;

R2 is hydrogen; or

15

R2 is a radical of the formula



20

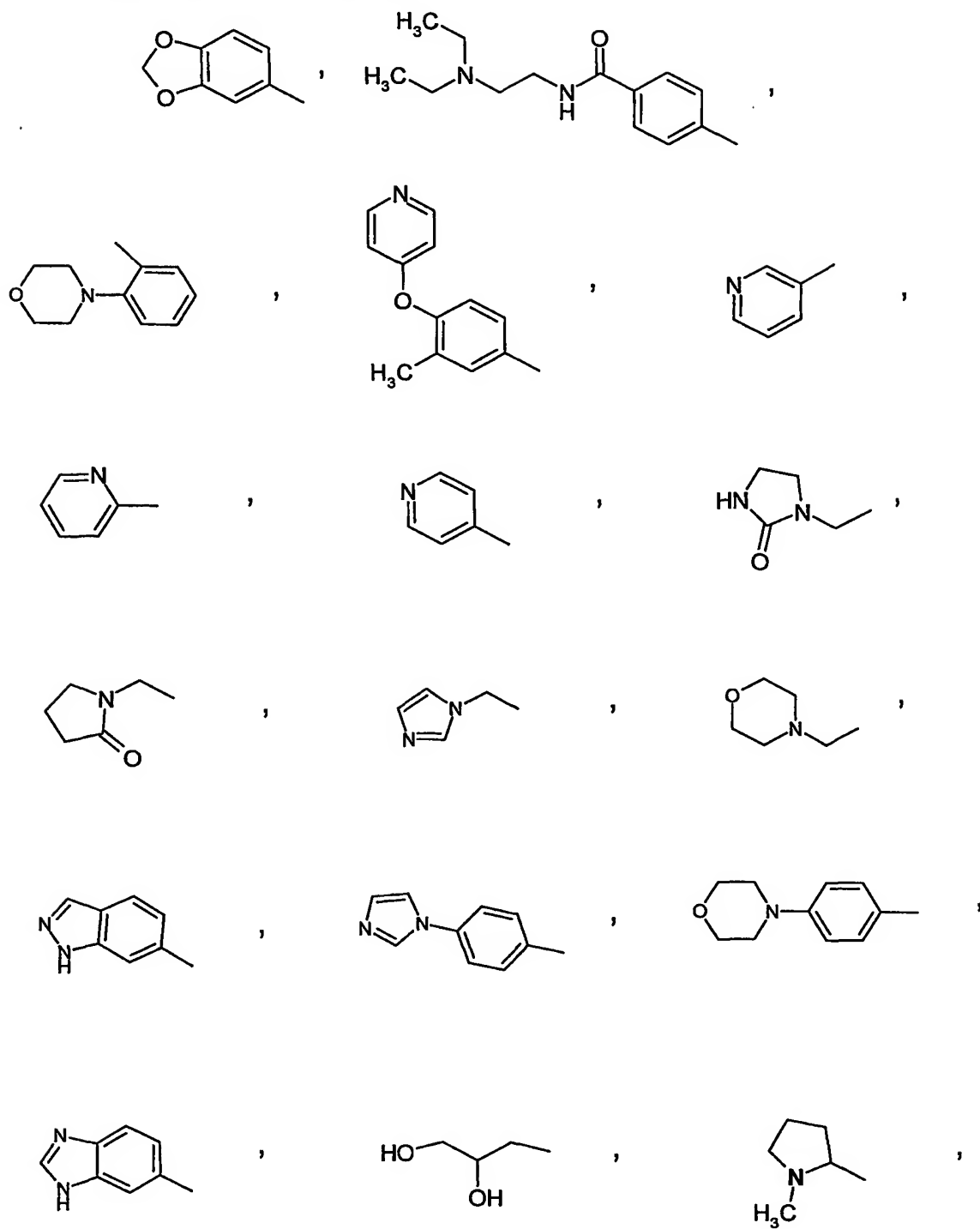
in which W is a bond, -CH₂-, -CH₂CH₂-, -C(=O)-, -NCH₃-, or -NH-;

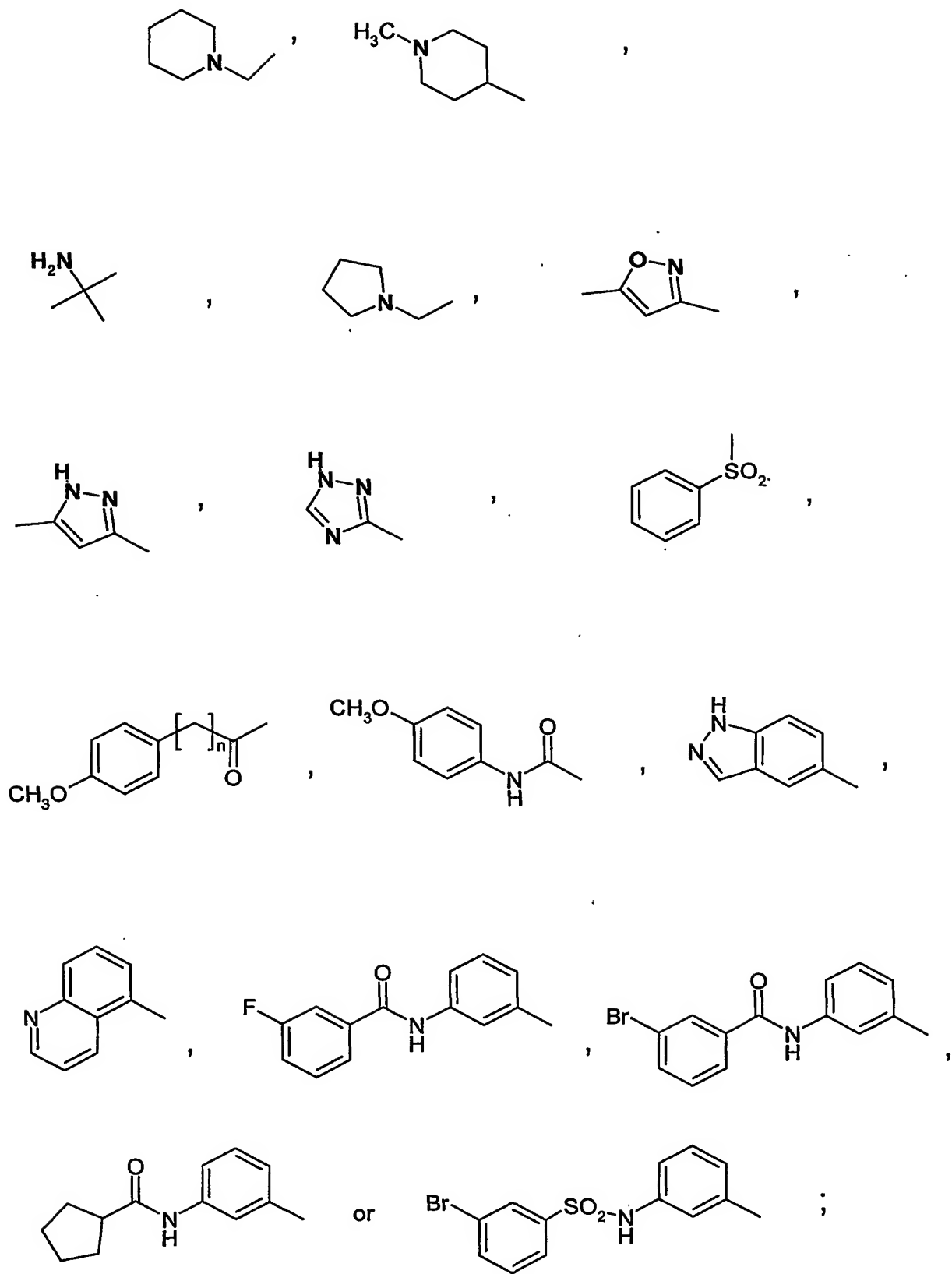
R is C₃₋₆cycloalkyl, C₁₋₆alkyl, hydroxy, -NH₂, (C₁₋₆alkyl)₂N-, C₁₋₆alkylo-, C₁₋₆alkyloCH₂-, phenyl optionally and independently substituted with one to three C₁₋₆alkyl, halogen, C₁₋₆alkylo-, C₁₋₆alkyloC(=O)-, acetyl, NH₂C(=O)-, FSO₂-, -CF₃, NH₂SO₂-, dimethylamino; HOCH₂-, CH₃NHC(=O)-, hydroxy,

25

phenyl; or

R is a radical of the formula





provided that W cannot be CH₂ when point of attachment of R to W is oxygen or nitrogen.

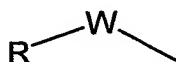
5 2. The compounds of formula I of claim 1 in which

R₁ is hydrogen, or C₁₋₆alkyl;

R₂ is hydrogen; or

10

R₂ is a radical of the formula

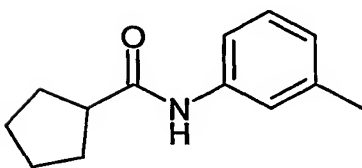
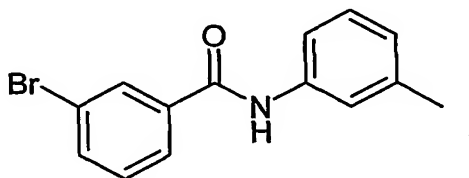
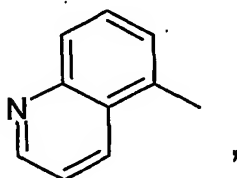
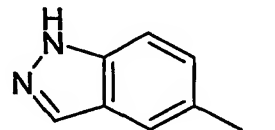
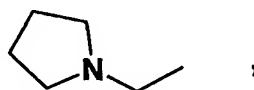
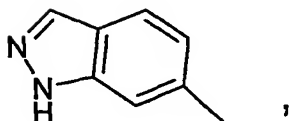


in which W is a bond, -CH₂-, -CH₂CH₂-, -C(=O)-, -NCH₃-, or -NH-;

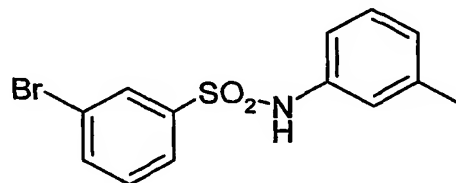
15

R is C₁₋₆alkyl, hydroxy, -NH₂, (C₁₋₆alkyl)₂N-, C₁₋₆alkylo-, C₁₋₆alkyloCH₂-, phenyl optionally and independently substituted with one to three C₁₋₆alkyl, halogen, C₁₋₆alkylo-, C₁₋₆alkyloC(=O)-, -CF₃, NH₂SO₂-, hydroxy, phenyl; or

R is a radical of the formula



or



20

provided that W cannot be CH₂ when point of attachment of R to W is oxygen or nitrogen.

- 5 3. A method of inhibiting hYAK3 and/or MK2 proteins in a mammal; comprising, administering to the mammal a therapeutically effective amount of a compound of claim 1 or 2, or a salt, solvate, or a physiologically functional derivative thereof.
- 10 4. A method of treating or preventing a disorder selected from the group consisting of neutropenia; cytopenia; anemias, including anemias due to renal insufficiency or to a chronic disease, such as autoimmunity or cancer, and drug-induced anemias; polycythemia; myelosuppression; rheumatoid arthritis; COPD; asthma; psoriasis; acute neuronal injury; heart failure; stroke, osteoarthritis; and ischemia reperfusion injury; comprising, administering to a mammal a therapeutically effective
15 amount of a compound of claim 1 or 2, or a salt, solvate, or a physiologically functional derivative thereof and one or more of pharmaceutically acceptable carriers, diluents and excipients.
- 20 5. A compound of any one of claims 1 to 4 that is
2-(2,6-dimethoxy-phenylamino)-9-methoxy-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.
- 25 6. A compound of any one of claims 1 to 4 that is
2-(1H-indazol-5-ylamino)-9-methoxy-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.
- 30 7. A compound of any one of claims 1 to 4 that is
9-methoxy-2-(2-methoxy-6-methyl-phenylamino)-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one .
- 35 8. A compound of any one of claims 1 to 4 that is
2-(1H-indazol-6-ylamino)-9-methoxy-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.
9. A compound of any one of claims 1 to 4 that is
2-(2-bromo-phenylamino)-9-methoxy-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.
10. A compound of any one of claims 1 to 4 that is

3-(9-methoxy-4-oxo-6,7-dihydro-4H-pyrimido[6,1-a]isoquinolin-2-ylamino)-benzenesulfonamide.

11. A compound of any one of claims 1 to 4 that is
5 2-(2-chloro-phenylamino)-9-methoxy-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.
12. A compound of any one of claims 1 to 4 that is
2-(2,6-dimethyl-phenylamino)-9-methoxy-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one
)
10
13. A compound of any one of claims 1 to 4 that is
2-(2-bromo-6-fluoro-phenylamino)-9-methoxy-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.
14. A compound of any one of claims 1 to 4 that is
15 2-(3-methoxy-phenylamino)-9-methoxy-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.
15. A compound of any one of claims 1 to 4 that is
2-(2-hydroxy-6-methyl-phenylamino)-9-methoxy-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.
20
16. A compound of any one of claims 1 to 4 that is
9-methoxy-2-(4-methoxy-biphenyl-3-ylamino)-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.
25
17. A compound of any one of claims 1 to 4 that is
3-(9-methoxy-4-oxo-6,7-dihydro-4H-pyrimido[6,1-a]isoquinolin-2-ylamino)-benzoic acid ethyl ester.
18. A compound of any one of claims 1 to 4 that is
30 9-methoxy-2-(2-methoxy-phenylamino)-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.
19. A compound of any one of claims 1 to 4 that is
9-methoxy-2-(2-trifluoromethyl-phenylamino)-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.
35
20. A compound of any one of claims 1 to 4 that is

2-(4-chloro-2,6-dimethyl-phenylamino)-9-methoxy-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.

21. A compound of any one of claims 1 to 4 that is
5 9-methoxy-2-(quinolin-5-ylamino)-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.

22. A compound of any one of claims 1 to 4 that is
2-(2-chloro-5-methoxy-phenylamino)-9-methoxy-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.

10 23. A compound of any one of claims 1 to 4 that is
2-[N'-(2-bromo-phenyl)-hydrazino]-9-methoxy-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.

15 24. A compound of any one of claims 1 to 4 that is
9-methoxy-2-(N'-methyl-N'-phenyl-hydrazino)-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.

25 25. A compound of any one of claims 1 to 4 that is
2-(2-amino-ethylamino)-9-methoxy-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.

26. A compound of any one of claims 1 to 4 that is
9-methoxy-2-(2-pyrrolidin-1-yl-ethylamino)-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.

25 27. A compound of any one of claims 1 to 4 that is
2-(2-dimethylamino-ethylamino)-9-methoxy-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.

30 28. A compound of any one of claims 1 to 4 that is
2-(2-hydroxy-ethylamino)-9-methoxy-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.

29. A compound of any one of claims 1 to 4 that is
9-methoxy-2-[(2-methoxy-ethyl)-methyl-aminol]-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.

35 30. A compound of any one of claims 1 to 4 that is

9-methoxy-2-(4-methoxy-benzylamino)-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.

31. A compound of any one of claims 1 to 4 that is

9-methoxy-2-(3-methoxy-benzylamino)-6,7-dihydro-pyrimido[6,1-a]isoquinolin-4-one.

5

32. A compound of any one of claims 1 to 4 that is

3-bromo-N-[3-(9-methoxy-4-oxo-6,7-dihydro-4H-pyrimido[6,1-a]isoquinolin-2-ylamino)-phenyl]-benzamide.

10 33 A compound of any one of claims 1 to 4 that is cyclopentanecarboxylic acid
[3-(9-methoxy-4-oxo-6,7-dihydro-4H-pyrimido[6,1-a]isoquinolin-2-ylamino)-phenyl]-amide.

34. A compound of any one of claims 1 to 4 that is

15 3-bromo-N-[3-(9-methoxy-4-oxo-6,7-dihydro-4H-pyrimido[6,1-a]isoquinolin-2-ylamino)-phenyl]-benzenesulfonamide.

35. A compound of any one of claims 1 to 4 that is

20 2-methoxy-N-(9-methoxy-4-oxo-6,7-dihydro-4H-pyrimido[6,1-a]isoquinolin-2-yl)-acetamide.

36. A compound of any one of claims 1 to 4 that is

2,4,6-trichloro-N-(9-methoxy-4-oxo-6,7-dihydro-4H-pyrimido[6,1-a]isoquinolin-2-yl)-benzamide.

25

37. A compound of any one of claims 1 to 4 that is

2-methoxy-N-(9-methoxy-4-oxo-6,7-dihydro-4H-pyrimido[6,1-a]isoquinolin-2-yl)-acetamide.